

CLAIMS:

1. A booklet-forming apparatus that forms a booklet having printed product information, said apparatus comprising:

a first processing apparatus comprising a cutting device, said first processing apparatus providing a profiled sheet of paper, said profiled sheet having a length and comprising a first sheet portion having a width transverse to said length of said profiled sheet and a second sheet portion having a width transverse to said length of said profiled sheet, said first sheet portion having a length parallel to said length of said profiled sheet and said second sheet portion having a length parallel to said length of said profiled sheet, said length of said first sheet portion being greater than said length of said second sheet portion and said width of said second sheet portion being greater than said width of said first sheet portion;

an adhesive applicator positioned to apply adhesive to a sheet of paper having product information printed thereon;

a first folding unit comprising a plurality of folding rollers, said first folding unit making a plurality of folds in said profiled sheet in a first direction perpendicular to said length of said profiled sheet to form an intermediate article comprising a plurality of inner sheet panels, an outer sheet panel that corresponds to said second sheet portion of said profiled sheet, a first folded edge parallel to said first direction, and a second folded edge parallel to said first direction, said folds being made so that said outer sheet panel is not disposed between two of said sheet panels and so that each of a plurality of said sheet panels is adhered to at least one other of said sheet panels by said adhesive along a bonded portion of said intermediate article disposed between a first end of said intermediate article and a second end of said intermediate article;

a second processing apparatus comprising a cutting device, said second processing apparatus removing said first and second folded edges of said intermediate article; and

a second folding unit comprising a pair of folding rollers, said second folding unit making a fold in said intermediate article along said bonded portion of said intermediate article and in a second direction perpendicular to said first direction, said fold in said intermediate article being made so that said outer sheet panel forms a pair of outer sheets and so that each of said inner sheet panels forms a pair of inner sheets that are disposed between said outer sheets.

2. An apparatus as defined in claim 1,
wherein said folding rollers of said second folding unit comprise first and second folding rollers,
wherein said first folding roller is disposed adjacent said second folding roller,
wherein said first and second folding rollers having a nip therebetween and cause said fold in said intermediate article to be made when said intermediate article passes between said first and second folding rollers, and
wherein said second folding unit additionally comprises a movable member that makes contact with a portion of said intermediate article to force said portion of said intermediate article towards said nip between said first and second folding rollers.
3. An apparatus as defined in claim 1 wherein said adhesive applicator comprises a nozzle and wherein said booklet-forming apparatus additionally comprises a controller operatively coupled to said nozzle, said controller comprising a memory and a processor and being programmed to control application of said adhesive by said nozzle.
4. An apparatus as defined in claim 1 wherein said first processing apparatus comprises a rotatable cutting wheel.
5. An apparatus as defined in claim 1 wherein said first processing apparatus comprises a pair of cutting devices.
6. An apparatus as defined in claim 1 wherein said first processing apparatus comprises a pair of cutting devices and a perforation-forming device.
7. An apparatus as defined in claim 1 wherein said adhesive applicator is positioned to apply said adhesive to said profiled sheet of paper.
8. An apparatus as defined in claim 1 wherein said adhesive applicator is positioned to apply said adhesive to a rectangular sheet of paper that is subsequently formed into said profiled sheet of paper by said first processing apparatus.
9. An apparatus as defined in claim 1 wherein said second processing apparatus is positioned to remove said first and second folded edges from said intermediate article after said second folding unit makes said fold in said intermediate article.

10. An apparatus as defined in claim 1 wherein said second processing apparatus is positioned to remove said first and second folded edges from said intermediate article before said second folding unit makes said fold in said intermediate article.

11. A booklet-forming apparatus that forms a booklet having printed product information, said apparatus comprising:

a first processing apparatus comprising a cutting device, said first processing apparatus providing a profiled sheet of paper having product information printed thereon, said profiled sheet having a length and comprising a first sheet portion having a width transverse to said length of said profiled sheet, a second sheet portion having a width transverse to said length of said profiled sheet, and a pair of removable tabs formed from part of said second sheet portion, said first sheet portion having a length parallel to said length of said profiled sheet and said second sheet portion having a length parallel to said length of said profiled sheet, said length of said first sheet portion being greater than said length of said second sheet portion and said width of said second sheet portion being greater than said width of said first sheet portion;

an adhesive applicator positioned to apply adhesive to a sheet of paper having product information printed thereon;

a first folding unit comprising a plurality of folding rollers, said first folding unit making a plurality of folds in said profiled sheet in a first direction perpendicular to said length of said profiled sheet to form an intermediate article comprising a plurality of inner sheet panels, an outer sheet panel that corresponds to said second sheet portion of said profiled sheet, a first folded edge parallel to said first direction, and a second folded edge parallel to said first direction, said folds being made so that said outer sheet panel is not disposed between two of said sheet panels and so that each of a plurality of said sheet panels is adhered to at least one other of said sheet panels by said adhesive along a bonded portion of said intermediate article disposed between a first end of said intermediate article and a second end of said intermediate article;

a second processing apparatus comprising a cutting device, said second processing apparatus removing said first and second folded edges of said intermediate article; and

a second folding unit comprising a pair of folding rollers, said second folding unit making a fold in said intermediate article along said bonded portion of said intermediate article and in a second direction perpendicular to said first direction, said fold in said

intermediate article being made so that said outer sheet panel forms a pair of outer sheets, so that each of said inner sheet panels forms a pair of inner sheets that are disposed between said outer sheets, and so that said removable tabs are coupled together to maintain said inner sheets in a substantially closed position.

12. An apparatus as defined in claim 11,

wherein said folding rollers of said second folding unit comprise first and second folding rollers,

wherein said first folding roller is disposed adjacent said second folding roller,

wherein said first and second folding rollers having a nip therebetween and cause said fold in said intermediate article to be made when said intermediate article passes between said first and second folding rollers, and

wherein said second folding unit additionally comprises a movable member that makes contact with a portion of said intermediate article to force said portion of said intermediate article towards said nip between said first and second folding rollers.

13. An apparatus as defined in claim 11 wherein said adhesive applicator comprises a nozzle and wherein said booklet-forming apparatus additionally comprises a controller operatively coupled to said nozzle, said controller comprising a memory and a processor and being programmed to control application of said adhesive by said nozzle.

14. An apparatus as defined in claim 11 wherein said adhesive applicator is positioned to apply said adhesive to said profiled sheet of paper.

15. An apparatus as defined in claim 11 wherein said adhesive applicator is positioned to apply said adhesive to a rectangular sheet of paper that is subsequently formed into said profiled sheet of paper by said first processing apparatus.

16. An apparatus as defined in claim 11 wherein said second processing apparatus is positioned to remove said first and second folded edges from said intermediate article after said second folding unit makes said fold in said intermediate article.

17. An apparatus as defined in claim 11 wherein said second processing apparatus is positioned to remove said first and second folded edges from said intermediate article before said second folding unit makes said fold in said intermediate article.

18. A booklet-forming apparatus that forms a booklet having printed product information, said apparatus comprising:

an adhesive applicator positioned to apply adhesive to a profiled sheet of paper having product information printed thereon, said profiled sheet having a length and comprising a first sheet portion having a width transverse to said length of said profiled sheet, a second sheet portion having a width transverse to said length of said profiled sheet, and a pair of removable tabs formed from part of said second sheet portion, said first sheet portion having a length parallel to said length of said profiled sheet and said second sheet portion having a length parallel to said length of said profiled sheet, said length of said first sheet portion being greater than said length of said second sheet portion and said width of said second sheet portion being greater than said width of said first sheet portion;

a first folding unit comprising a plurality of folding rollers, said first folding unit making a plurality of folds in said profiled sheet in a first direction perpendicular to said length of said profiled sheet to form an intermediate article comprising a plurality of inner sheet panels, an outer sheet panel that corresponds to said second sheet portion of said profiled sheet, a first folded edge parallel to said first direction, and a second folded edge parallel to said first direction, said folds being made so that said outer sheet panel is not disposed between two of said sheet panels and so that each of a plurality of said sheet panels is adhered to at least one other of said sheet panels by said adhesive along a bonded portion of said intermediate article disposed between a first end of said intermediate article and a second end of said intermediate article;

a processing apparatus that removes said first and second folded edges of said intermediate article; and

a second folding unit comprising a pair of folding rollers, said second folding unit making a fold in said intermediate article along said bonded portion of said intermediate article and in a second direction perpendicular to said first direction, said fold in said intermediate article being made so that said outer sheet panel forms a pair of outer sheets, so that each of said inner sheet panels forms a pair of inner sheets that are disposed between said outer sheets, and so that said removable tabs are coupled together to maintain said inner sheets in a substantially closed position.

19. An apparatus as defined in claim 18 additionally comprising an adhesive applicator positioned to apply adhesive to one of said removable tabs prior to said intermediate article being folded by said second folding unit.

20. An apparatus as defined in claim 18,
wherein said folding rollers of said second folding unit comprise first and second folding rollers,

wherein said first folding roller is disposed adjacent said second folding roller,

wherein said first and second folding rollers having a nip therebetween and cause said fold in said intermediate article to be made when said intermediate article passes between said first and second folding rollers, and

wherein said second folding unit additionally comprises a movable member that makes contact with a portion of said intermediate article to force said portion of said intermediate article towards said nip between said first and second folding rollers.

21. An apparatus as defined in claim 18 wherein said adhesive applicator comprises a nozzle and wherein said booklet-forming apparatus additionally comprises a controller operatively coupled to said nozzle, said controller comprising a memory and a processor and being programmed to control application of said adhesive by said nozzle.

22. An apparatus as defined in claim 18 wherein said processing apparatus comprises a rotatable cutting wheel.

23. An apparatus as defined in claim 18 wherein said processing apparatus is positioned to remove said first and second folded edges from said intermediate article after said second folding unit makes said fold in said intermediate article.

24. A booklet-forming apparatus that forms a booklet having printed product information, said apparatus comprising:

a first processing apparatus providing a profiled sheet of paper having a length and comprising a first sheet portion having a width transverse to said length of said profiled sheet, a second sheet portion having a width transverse to said length of said profiled sheet, and a pair of removable tabs formed from part of said second sheet portion, said first sheet portion having a length parallel to said length of said profiled sheet and said second sheet portion having a length parallel to said length of said profiled sheet, said length of said first sheet

portion being greater than said length of said second sheet portion and said width of said second sheet portion being greater than said width of said first sheet portion;

an adhesive applicator positioned to apply adhesive to a sheet of paper having product information printed thereon;

a folding unit comprising a plurality of folding rollers, said folding unit making a plurality of folds in said profiled sheet in a first direction perpendicular to said length of said profiled sheet to form an intermediate article comprising a plurality of inner sheet panels, an outer sheet panel that corresponds to said second sheet portion of said profiled sheet, a first folded edge parallel to said first direction, and a second folded edge parallel to said first direction, said folds being made so that said outer sheet panel is not disposed between two of said sheet panels, so that each of a plurality of said sheet panels is adhered to at least one other of said sheet panels by said adhesive along a bonded portion of said intermediate article, and so that a portion of each of said removable tabs is disposed beyond said inner sheets; and

a second processing apparatus that removes said first and second folded edges of said intermediate article.

25. An apparatus as defined in claim 24 wherein said adhesive applicator comprises a nozzle and wherein said booklet-forming apparatus additionally comprises a controller operatively coupled to said nozzle, said controller comprising a memory and a processor and being programmed to cause said nozzle to omit application of said adhesive to at least a portion of one of said sheet panels to cause said one sheet panel to be removable.

26. An apparatus as defined in claim 24 wherein said adhesive applicator is positioned to apply said adhesive to said profiled sheet of paper.